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10/073,241	02/13/2002	Marko Karpanen	60279.00138	8874

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EXAMINER

MCCARTHY, CHRISTOPHER S

ART UNIT PAPER NUMBER

2113

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/073,241

Applicant(s)

KARPPANEN, MARKO

Examiner

Christopher S. McCarthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-18,20-26,28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-18,20-26,28 and 29 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>response to arguments</u> |

DETAILED ACTION

Claim Objections

1. Claim 28 is objected to because of the following informalities: Claim 28 is dependent upon canceled claim 27. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 9-16, 20-23, 25, 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Golikeri et al. U.S. Patent Application Publication US2003/0067926.

As per claim 9, Golikeri teaches a method for improving the reliability of a computer system including a bus and plug-in units coupled thereto, comprising: connecting at least one plug-in unit to a bus via a separate interface circuit corresponding thereto (¶ 0071-0072, wherein, modules can be added or removed without powering off; this is interpreted as hot-plugging and, therefore, plug in units; 0036, wherein, a bus is described as connecting the modules; 0050-0051, wherein, interface logic is described in the form of the management/control logic unit of the module that controls, monitors the other components and is responsible for the connection and

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operation of the module, and, therefore, the addressing operations of the module); addressing a respective plug-in unit, via the bus, by addressing operations directed at said respective plug-in unit and which are monitored locally by said interface circuit corresponding thereto (§ 0051, wherein the operations are controlled by the management/control interface; 0018, wherein, it is taught that the local addressing operations of the module are monitored locally); performing a time duration operation of addressing of said plug-in unit (§ 0060-0061); and checking the state of addressing of the addressed plug-in unit such that (i) when the addressing is ended before expiration of a predetermined period of time, the time duration operation of addressing is terminated and a new time duration operation of addressing is set to commence at time of next occurrence of addressing (§ 0060, wherein, when the timer is reset when the module processes a data frame before the timer expires), and (ii) when the duration operation of addressing exceeds the predetermined time period, the addressing to that plug-in unit is terminated by said interface circuit corresponding thereto by sending into the bus a signal indicating termination of addressing (§ 0039, 0060-0061, wherein, the local addressing operation of the module times out and a signal is sent out on the bus/network that the corresponding address is now obsolete, that is, no longer valid, erroneous).

As per claim 10, Golikeri teaches a method as defined in claim 9, wherein: the time duration of addressing is monitored using a watchdog timer with a predetermined timing set therein (§ 0060).

As per claim 11, Golikeri teaches a method as defined in claim 9, wherein: when addressing is terminated an error signal is set by the interface circuit into an active state in the bus (§ 0061, wherein, the purge signal set to active to be sent over the bus/network).

As per claim 12, Golikeri teaches a method as defined in claim 9, wherein: when addressing is terminated an error signal indicating an error condition in the plug-in unit is set by the interface circuit into active state in the status register of the plug-in unit (§0040, 0041; wherein, the status of the register is changed in that the module will no longer send out “keep-live” messages to other modules, so they will know that the address was purged; just in case the purge message was not received by all other modules).

As per claim 13, Golikeri teaches an interface circuit for providing local monitoring capability to a plug-in unit of a computer, comprising: a watchdog timer (P 0060-0061); first means for activating the watchdog timer upon start of an addressing operation directed to the plug-in unit corresponding thereto (§0060, wherein, the aging timer must have been started prior to the expiration thereof), and second means for sending into the bus a signal indication termination of addressing, the termination of addressing being effected when the duration of said addressing exceeds a predetermined time duration for addressing, as measured by the watchdog timer (§0060-0061).

As per claim 14, Golikeri teaches an interface circuit as defined in claim 13, further comprising: means for setting an error signal into active state in the bus (§ 0061).

As per claim 15, Golikeri teaches an interface circuit as defined in 13, further comprising: for setting a signal indicating an error condition in the plug-in unit into an active state in the status register of the plug-in unit (P 0040, 0041; wherein, the status of the register is changed in that the module will no longer send out “keep-live” messages to other modules, so they will know that the address was purged; just in case the purge message was not received by all other modules).

As per claim 16, Golikeri teaches an interface circuit as defined in 14, further comprising: means for setting a signal indicating an error condition in a plug-in unit into an active state in the status register of the plug-in unit (P 0040, 0041; wherein, the status of the register is inherently changed in that the module will no longer send out “keep-live” messages to other modules, so they will know that the address was purged; just in case the purge message was not received by all other modules).

As per claim 20, Golikeri teaches a method according to claim 10, wherein: said watchdog timer is provided at each said interface circuit or at each said plug-in unit (§ 0060-0061).

As per claim 21, Golikeri teaches a computer system including a bus and at least one plug-in unit coupled thereto, wherein the improvement comprises: providing a plurality of interface circuit and a plurality of one plug-in unit each of which is connected to said bus via a separate said interface circuit corresponding thereto (§ 0071-0072, 0036, 0050-0051), wherein each said interface circuit comprises a watchdog timer (§ 0060), first means for activating the watchdog timer upon start of an addressing operation directed to the plug-in unit corresponding thereto (§ 0060, wherein, activation of said timer must have been prior to the detection of whether the timer has expired), and second means for sending into the bus a signal indicating termination of addressing, the termination of addressing being effected when the duration of said addressing exceeds a predetermined time duration for addressing, as measured by the watchdog timer (§ 0060-0061).

As per claim 22, Golikeri teaches a computer system according to claim 21, wherein each said interface further comprises: means for setting an error signal into an active state in the bus (§ 0061).

As per claim 23, Golikeri teaches a computer system according to claim 22, wherein each said interface circuit comprises means for setting a signal indicating an error condition in the corresponding plug-in unit into an active state in a status register of the plug-in unit (P 0040, 0041; wherein, the status of the register is inherently changed in that the module will no longer send out “keep-live” messages to other modules, so they will know that the address was purged;; just in case the purge message was not received by all other modules).

As per claim 25, Golikeri teaches a computer system according to claim 21, wherein each said interface circuit comprises means for setting a signal indicating an error condition in the plug-in unit into an active state in a status register of the plug-in unit (P 0040, 0041; wherein, the status of the register is inherently changed in that the module will no longer send out “keep-live” messages to other modules, so they will know that the address was purged; just in case the purge message was not received by all other modules).

As per claim 29, Golikeri teaches an interface circuit for providing local monitoring capability to a plug-in unit of a computer system, comprising a bus and plug-in units coupled to the bus (§ 0036); a separate interface circuit connecting each of the plug-in units to the bus (§ 0050-0051); a watchdog timer (§ 0060); an activating device configured to activate the watchdog timer upon start of an addressing operation directed to the plug-in unit corresponding thereto (§ 0060-0061, wherein, activation of the timer must have been achieved prior to detection of the timer expiration); and a sending device configured to send a signal into the bus indicating

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termination of addressing, the termination of addressing being effected when the duration of said addressing exceeds a predetermined time duration for addressing, as measured by the watchdog timer (§ 0061).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-18, 24, 26, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golikeri in view of Microsoft Computer Dictionary, referred hereon as Microsoft.

As per claim 17, Golikeri teaches an interface circuit as defined in claim 13 with a bus (§ 0036). Golikeri does not explicitly teach wherein the bus is a CompactPCI bus. Microsoft does teach a CompactPCI bus (page 99). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CompactPCI bus of Microsoft in the bus system of Golikeri. One of ordinary skill would have been motivated to use the CompactPCI bus of Microsoft in the bus system of Golikeri because Microsoft teaches wherein the CompactPCI bus is suitable for high-speed communication devices, such as router; this is an explicit embodiment of Golikeri (§ 0088), and a high speed communication means would have been a desired advantage in Golikeri in that he teaches the desire of multiple connected peripheral modules, such as routers, in strict synchronization with another.

As per claim 18, Golikeri teaches an interface circuit as defined in claim 16 with a bus (¶ 0036). Golikeri does not explicitly teach wherein the bus is a CompactPCI bus. Microsoft does teach a CompactPCI bus (page 99). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CompactPCI bus of Microsoft in the bus system of Golikeri. One of ordinary skill would have been motivated to use the CompactPCI bus of Microsoft in the bus system of Golikeri because Microsoft teaches wherein the CompactPCI bus is suitable for high-speed communication devices, such as router; this is an explicit embodiment of Golikeri (¶ 0088), and a high speed communication means would have been a desired advantage in Golikeri in that he teaches the desire of multiple connected peripheral modules, such as routers, in strict synchronization with another.

As per claim 24, Golikeri teaches a computer system according to claim 23, with a bus (¶ 0036). Golikeri does not explicitly teach wherein the bus is a CompactPCI bus. Microsoft does teach a CompactPCI bus (page 99). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CompactPCI bus of Microsoft in the bus system of Golikeri. One of ordinary skill would have been motivated to use the CompactPCI bus of Microsoft in the bus system of Golikeri because Microsoft teaches wherein the CompactPCI bus is suitable for high-speed communication devices, such as router; this is an explicit embodiment of Golikeri (¶ 0088), and a high speed communication means would have been a desired advantage in Golikeri in that he teaches the desire of multiple connected peripheral modules, such as routers, in strict synchronization with another.

As per claim 26, Golikeri teaches a computer system according to claim 21, with a bus (¶ 0036). Golikeri does not explicitly teach wherein the bus is a CompactPCI bus. Microsoft does

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teach a CompactPCI bus (page 99). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CompactPCI bus of Microsoft in the bus system of Golikeri. One of ordinary skill would have been motivated to use the CompactPCI bus of Microsoft in the bus system of Golikeri because Microsoft teaches wherein the CompactPCI bus is suitable for high-speed communication devices, such as router; this is an explicit embodiment of Golikeri (§ 0088), and a high speed communication means would have been a desired advantage in Golikeri in that he teaches the desire of multiple connected peripheral modules, such as routers, in strict synchronization with another.

As per claim 28, Golikeri teaches a computer system according to claim 27, with a bus (§ 0036). Golikeri does not explicitly teach wherein the bus is a CompactPCI bus. Microsoft does teach a CompactPCI bus (page 99). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CompactPCI bus of Microsoft in the bus system of Golikeri. One of ordinary skill would have been motivated to use the CompactPCI bus of Microsoft in the bus system of Golikeri because Microsoft teaches wherein the CompactPCI bus is suitable for high-speed communication devices, such as router; this is an explicit embodiment of Golikeri (§ 0088), and a high speed communication means would have been a desired advantage in Golikeri in that he teaches the desire of multiple connected peripheral modules, such as routers, in strict synchronization with another.

Response to Arguments

6. Applicant's arguments filed 7/19/06 have been fully considered but they are not persuasive.

The applicant has argued that Golikeri does not teach wherein the monitoring of the addressing of the plug-in unit is done locally. The examiner respectfully disagrees. Golikeri explicitly teaches that the module (which is interpreted to be the plug-in unit) monitors the status of its locally owned addresses (§ 0018). The applicant also has argued that Golikeri does not teach wherein a separate interface circuit performs the monitoring. The examiner respectfully disagrees. As cited in the applicable rejected claims, each module of Golikeri comprises a management/control logic that interfaces the module to control the components of the module and monitors the operational status of the module; this would include any addressing operations in the module.

In light of the above arguments, all applicable rejected claims stand.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (571)272-3651. The examiner can normally be reached on M-F, 9 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christopher S. McCarthy
Examiner
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